

REMARKS

Claims 1-15, 23 and 31 are pending in this application. Applicant appreciates the Office Action's indication that claims 7, 10 and 12-15 contain allowable subject matter.

By this Amendment, claim 1 is amended and claim 31 is added to recite additional features disclosed in the specification at, for example, Figs. 1 and 3, and paragraph [0054].

Reconsideration of the application is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (as the amendments amplify issues previously discussed throughout prosecution); (c) place the application in better form for appeal, should an appeal be necessary. Entry of the amendments is thus respectfully requested.

The Office Action rejects claims 1-6, 8, 11 and 23 under 35 U.S.C. §103(a) over U.S. Patent No. 6,087,719 to Tsunashima; and rejects claim 9 under 35 U.S.C. §103(a) over Tsunashima in view of U.S. Patent No. 6,608,371 to Kurashima et al. ("Kurashima"). These rejections are respectfully traversed.

Claim 1 is amended to clarify that the second semiconductor substrate is directly adhered via an adhesive layer to the first semiconductor substrate with no gap other than the adhesive layer between the first and second semiconductor substrates. Tsunashima and Kurashima, either individually or in combination, do not disclose or suggest this feature.

In particular, Tsunashima discloses chips 1A, 1B and 1C that are attached via solder bumps 9. See Fig. 1 and col. 4, lines 4-15 and lines 39-44. The chips are separated from each other with gaps therebetween. Thus, Tsunashima does not disclose or suggest the subject matter recited in claim 1.

Kurashima discloses semiconductor chips 10 connected by solder 30. See Figs. 2C and 8, and col. 10, lines 15-21. The semiconductor chips 10 are separated from each other by gaps. See Fig. 2C. Therefore, Kurashima does not disclose or suggest the subject matter recited in claim 1. Hence, Kurashima does not supply the subject matter lacking in Tsunashima.

For at least the above reasons, Tsunashima and Kurashima, either individually or in combination, do not disclose or suggest the subject matter recited in claim 1, and claims 2-6, 8, 9, 11 and 23 depending therefrom. Accordingly, withdrawal of the rejection of claims 1-6, 8, 9, 11 and 23 under 35 U.S.C. §103(a) is respectfully requested.

Claim 31 is patentable over Tsunashima and Kurashima. In particular, claim 31 recites a through-hole continuously extending through the first and the second semiconductor substrate, and continuously extending from the first semiconductor substrate to the second semiconductor substrate. Tsunashima and Kurashima, either individually or in combination, do not disclose or suggest this feature.

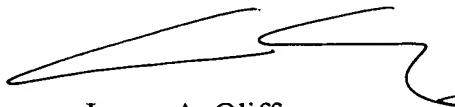
Tsunashima discloses a through-hole 4 that separately extends through different chips 1A, 1B and 1C. See Fig. 1 and col. 4, lines 39-44. Tsunashima does not disclose or suggest a through-hole that continuously extends from a first semiconductor substrate to a second semiconductor substrate. Therefore, Tsunashima does not disclose or suggest the subject matter recited in claim 31.

Kurashima does not disclose or suggest a through-hole that continuously extends from a first semiconductor substrate to a second semiconductor substrate. Therefore, Kurashima does not supply the subject matter lacking in Tsunashima. Thus, Tsunashima and Kurashima, either individually or in combination, do not disclose or suggest the subject matter recited in claim 31. Accordingly, claim 31 is patentable.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-15, 23 and 31 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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